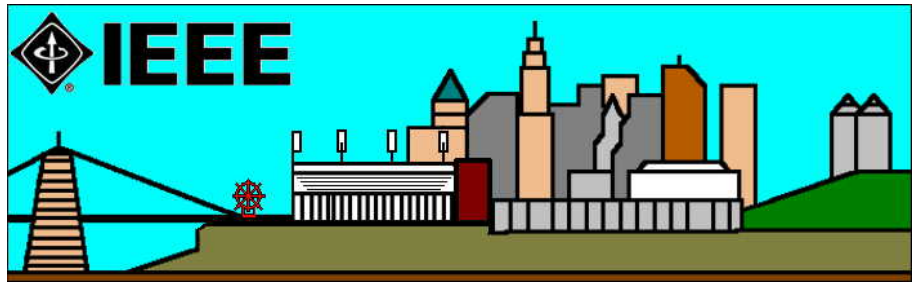


IEEE CINCINNATI
SECTION
NEWSLETTER
FEBRUARY 2006



FEBRUARY MEETINGS

There are two events this month: First is a presentation / tour on ATSC Digital Television Technology to be held at Harris Corporation, Broadcast Communications Division. The second event is the 71st Annual Engineers & Scientists of Cincinnati's Awards Banquet. Details on each event follow:

ATSC Digital Television

DATE: Thursday, February 23, 2006

PLACE : Harris Broadcast Division
4393 Digital Way
Mason, Ohio 45040

AGENDA: Presentation from 7:00 to 8:00 p.m.
Tour from 8:00 p.m. to ?

We will not serve a dinner at this meeting, but instead we will be meeting at Claddaugh Irish Pub, 5075 Deerfield Blvd, Mason, Ohio 45040. Claddaugh's is on Mason Montgomery Road in Deerfield Commons on the left just beyond Lowes. Ask for the IEEE table. Drinks will be at 5:30, Dinner at 6:00 (everyone is on their own), and we will all drive to Harris together at 6:50. Harris is just up the road from Claddaugh's.

Mapquest or Google Local can give directions to Harris. **There is no fee for this meeting,** but we still need everyone to make reservations for dinner and/or the meeting so we will know how big a table to reserve at Claddaugh and also to let Harris know how many visitors they will have. Please call the Cincinnati Section Voice Mailbox at **513-629-9380**, by **Noon, Tuesday, Feb. 21, 2006** if you plan to attend. Please leave your Name, IEEE Member Number, and a daytime telephone number. You can also make a reservation by e-mailing our Arrangements Chair, Charlie Nash, at cnash@ieee.org.

ABOUT THE PRESENTATION: The US transition to digital television is entering its third phase and the end of analog television broadcasts has been defined. Jay Adrick and Dave Danielsons of Harris Corporation's Broadcast Communications Division based in Mason Ohio will present an overview of the ATSC DTV technology and the impact that its deployment has had on television stations around the US. The presentation includes an overview of digital video, MPEG-2 encoding, 8VSB modulation and high power amplification of a digital RF signal. The status of the transition for 6 major TV networks, almost 1700 TV stations and more than 124 million TV households will also be part of the presentation.

ABOUT THE SPEAKER: Our speaker will be Mr. Jay C. Adrick, Vice President – Broadcast Technology Harris Corporation, Broadcast Communications Division.

A 42+-year veteran of the broadcast industry, Jay Adrick is a leader in the design and integration of digital broadcasting systems.

In Mr. Adrick's current position at Harris, he plays an instrumental role in the strategic planning, development and acquisition of solutions that address the emerging needs of the electronic media industry. This includes both hardware and software solutions for digital radio and television broadcasting, consolidated monitoring and control of media network and broadcast facilities and the networked interconnection of broadcast equipment. He has been involved in the recent Harris acquisition of Leitch Technology, Inc. and works on integrating the technology solutions across the Harris portfolio of electronic media products.

Recently, Jay led the broadcast team that rebuilt the infrastructure for the Iraqi Media Network. IMN operates two radio and television networks broadcast terrestrially throughout Iraq and 1 satellite channel for the Middle East. IMN is commercial media company formed out of the assets of the former state run Iraq Broadcast organization. Harris Corporation completed a 14 month contract for managing the overall operations of IMN.

In addition to his Harris duties, Jay completed a term as a member of the board of directors and Vice Chairman of the Advanced Television Systems Committee, which is the standards organization for the North American digital television standard. He is currently a board member of the ATSC Forum, the organization that serves to promote and educate potential adopters of the ATSC digital television standard outside of the US. In addition, he serves on the FCC Media Security and Reliability Council.

A member of the Society of Broadcast Engineers and the Society of Motion Picture and Television Engineers, he has authored and presented a large number of technical papers and chaired various technical presentations. Prior to joining Harris, he was a professor of Communications at Xavier University (Cincinnati, Ohio) for eight years and also taught electronic media courses at the University of Cincinnati. While at Xavier, he served as the director of radio and television and was a founder of public radio station WXXU-FM.

Mr. Adrick holds a Bachelor of Science degree in communication arts and a Masters degree in educational communications from Xavier University.

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71st Annual Engineers & Scientists of Cincinnati's Awards Banquet

ENGINEERS AND SCIENTISTS of GREATER CINCINNATI
invites you to attend the

71ST ANNUAL RECOGNITION and AWARDS PROGRAM
to be held on Thursday, February 23, 2006 at

Great American Ball Park
100 Main Street (Downtown Riverfront)
Cincinnati, OH

TIME: **5:30 P.M. - Cocktails, Open Touring of the Red's Hall of Fame Museum**
 7:00 P.M. - Dinner - Riverfront Club
 8:00 P.M. - Program

COST: **\$40.00 (Parking pass provided with pre-registration only)**

This year the ESC Banquet will be held at the Great American Ball Park. In addition to honoring several outstanding engineers and scientists, we will be entertained by the **Baby Grands** from **The School for Performing and Creative Arts** and hear from **Greg Rhodes, Executive Director of the Red's Hall of Fame and Museum.**

This dinner is a joint meeting with the American Society of Civil Engineers (ASCE), the Ohio Society of Professional Engineers, and the Northern Kentucky Chapter of the Kentucky Society of Professional Engineers (NKSPE). In addition, many other technical and professional societies will be represented by those in attendance. Come and share experiences with other professionals, make new friends, enjoy good food and meet this year's award recipients.

Reservations may be made by contacting Jean DeLorenzo at Woolpert, Inc. (phone 513-272-8300 or Jean.DeLorenzo@Woolpert.com). Reservations must be made by **February 16, 2006**. You will need to provide names for nametags and an e-mail address to send a parking pass. A buffet dinner will be served with several choices, including a vegetarian entree'. Cancellations will need to be received prior to February 17, 2006 to avoid being charged for the evening. You may pay at the registration table with either cash or a check made payable to "ESC".

So, come and share the experience with other professionals, make new friends, enjoy good food and meet this year's award recipients!

CHAIR'S MESSAGE

by Jim Everly, Section Chair

Last month's meeting provided information on the requirements for renewal of your PE License. The Cincinnati Section will now provide a certificate of attendance for Section Meetings that meet the requirements for CEU/PDH credit. We are also working with the University of Cincinnati to develop short courses that can be used for renewal credit.

I have also been asked by the Columbus Section to place the Cincinnati Section on email distribution for short courses being offered in Columbus. This will provide additional course offerings if you are willing to drive the distance.

Also, just a reminder, the Cincinnati Section is recruiting members to be upgraded to Senior Member. This month could be your month to elevate your membership. The application process is easy if you have an up-to-date resume. If you are interested in elevating your IEEE membership to Senior Member, be sure to attend the monthly section meeting. After the technical presentation I will hold an informal session on how to prepare a senior member application.

NEW MEMBERS

The following individuals are IEEE members who are new to our Section:

Kondo Hloindo Adjallah	Lee W. Fleenor	Jenny Jones	Jennifer R. Scott
Jason Barkeloo	Stuart W. Gibbon	Phillip D. Keathley	James D. See
Sandip Basu	Dan C. Herman	Rick Kerans	Frank A. Valdes
Rohit Chaudhary	Mircea M. Ionescu	Mark S. McCloy	Arthur W. Vaupel
Terry P. Drees	Thomas S. Jacyszyn	Lowell E. Reed	
Ronald F. Duplain	Arun Janarthanan	Robert W. Schuermann	

We wish to welcome these new members to our Section!!!

Scanning the Past: A History of Electrical Engineering from the Past

Submitted by Dick Reiman, Historian

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Lewis B. Stillwell

Eighty five years ago this month, Lewis B. Stillwell, an eminent consulting engineer, spoke on the subject of "electricity and the conservation of energy" at a joint meeting of the American Institute of Electrical Engineers (AIEE) and three other national engineering societies. According to Stillwell, conservation meant "utilization without unnecessary waste" and, more broadly, it meant the development of natural resources, such as water, in such a way as to enhance or increase the resource. For example, he pointed out that renewal of forests produced beneficial effects on stream flow. He suggested that steps should be taken to turn the nation away from "reckless waste ... to a policy of wise conservation, having due regard to the common interest now and in the future." Stillwell urged the professional engineering societies to take an active role, not only in conservation of resources, but also in influencing public opinion "along lines that will result in the enactment of just and wise laws." He continued that the "economic utilization of our natural resources is the fundamental problem of all engineering." He concluded that every engineer ought to strive to prevent mistakes in policy which might result "from actions based upon insufficient and inaccurate knowledge."

Stillwell was born in Scranton, PA, in 1863 and graduated with a degree in electrical engineering from Lehigh University in 1885. He then joined the engineering staff of the Westinghouse Electric and Manufacturing Company in Pittsburgh, where he and a small group of outstanding young engineers, including Charles F. Scott, Otto Shallenberger, and Benjamin G. Lamme, worked to develop an alternating-current power system. Stillwell became Chief Electrical Engineer at Westinghouse in 1890, and the first hydroelectric generating plant at Niagara Falls was designed and installed under his leadership. The Niagara Falls plant began operation in August 1895, and, in 1897, Stillwell left Westinghouse to become the electrical director of the Niagara Falls Power Company. In 1900, Stillwell became director of the Rapid Transit Subway Company in New York City. For the rest of his career he developed a successful engineering practice with clients including the Manhattan Elevated Railway Company, the New Haven Railroad, and the Port of New York Authority.

Stillwell was quite active in the AIEE, serving on its committee on standardization in 1898 and as the AIEE President for 1909-1910. During his tenure as President, he created a committee to formulate a code of ethics for electrical engineers. In 1933 he received the AIEE Lamme Medal (named for his former colleague at Westinghouse) and, two years later, the Edison Medal in recognition of his many contributions to the field of electric power. He is credited with a number of inventions including the Stillwell regulator and a time-limit circuit breaker. Stillwell died in January 1941 at age 77.

James E. Brittain

School of History, Technology, and Society, Georgia Institute of Technology

IEEE NEWS

Trends Likely to Affect Us All in 2006: IEEE-USA Today's Engineer Online Article

WASHINGTON (13 January 2006) -- Changes and trends in eight major areas likely to affect how we live, work and play are examined in the latest issue of IEEE-USA Today's Engineer Online.

In "What Lies Ahead: Forecast for 2006," Today's Engineer author George McClure examines technology, energy, climate change, work force, employment benefits, immigration, infrastructure and the economy. McClure, a noted expert on technology careers and retirement benefits, looks at where things are today and where they're likely headed. A sampling:

* The United States has the lowest savings rate among developed nations, implying a lack of savings for retirement and children's college costs. McClure points out the trend of greater consumer spending than consumer income "works for only so long, and will cease to be a source of consumption funding as interest rates rise to combat inflation."

* Significant upgrades are needed to repair the United States' crumbling infrastructure, including \$50 billion to improve the national power grid over the next five years. "As power demand increases by 50 percent in 20 years," McClure writes in Today's Engineer, "so will the problem of getting it to the user, as well as the prospect for further blackouts, if reliability is not improved."

* Retirement security is gaining more societal importance as the first baby boomers approach full retirement age in five years. Concerns about fewer workers to replace those retiring, and retirees wondering about having enough money to live comfortably in retirement point toward more older Americans working at least part-time past age 65. The prospect of partial retirement -- in which a person works reduced hours while drawing a partial pension -- could help alleviate these concerns, "but requires changes in the law," according to McClure.

To read the entire article, go to www.todaysengineer.org.

NEW NANOTECH EXHIBIT ON IEEE VIRTUAL MUSEUM

The IEEE History Center is proud to announce the launch of the newest exhibit on the IEEE Virtual Museum (VM): "Small is Big: The Coming Nanotechnology Revolution." Kudos again to VM Program Manager Kim Breitfelder.

It can be accessed directly at <http://www.ieee-virtual-museum.org/exhibit/exhibit.php?id=159272&lid=1>.

If you haven't visited the VM in a while, here's your excuse to do so!

CURRENT EDITION OF IEEE's "THE INSTITUTE" IS NOW ON-LINE

It's your report on news around the IEEE, from the editors of The Institute. The current version of The Institute can always be found at <http://www.ieee.org/theinstitute>.

Included in this issue:

- In Tampa, Sections Congress Creates Sharp Leaders. IEEE Senior Member Jim Howard calls it "the best and the greatest IEEE meeting there is." Hyperbole aside, IEEE Sections Congress 2005, held from 14 to 17 October in Tampa, Fla., brought together hundreds of volunteers from all over the world to sharpen their leadership skills, enhance their knowledge of the IEEE, and network with other volunteers. Learn more at <http://boldfish.ieee.org:80/u/1506/04824637>
- U.S. Engineers Week Zeroes In on Youngsters From linking engineers with educators to a design competition for kids to a family festival with an engineering theme, U.S. Engineers Week 2006, taking place from 19 to 25 February, has a lot to offer. EWeek activities seek to increase the public's awareness of the key role engineers play in society and to help build the technical literacy of young people. Read more at <http://boldfish.ieee.org:80/u/1507/04824637>
- IEEE Computer Society Celebrates 60 Years. Founded the same year that ENIAC, one of the world's first electronic computers was built and turned on, the IEEE Computer Society kicks off its anniversary celebration this month. The society's flagship magazine, Computer, is running the first of a monthly series of articles on the history of computing. The society also is compiling a list of the 25 most innovative technologies of the past decade. Find out more at <http://boldfish.ieee.org:80/u/1508/04824637>

- Marketplace of Ideas: Internet Control: Do you think the U.S. Department of Commerce should continue to control the Internet Corporation for Assigned Names and Numbers, which hands out Web site domain names, or should oversight be turned over to the United Nations? Weigh in at institute@ieee.org
- Don't Leave Home Without It -- the "Geek Guide": In this month's IEEE Spectrum Online, the "Geek Guide" highlights worldwide roads less traveled by the average tourist, roads that lead to technology museums, landmarks, and marvels. This installment covers goings-on in Baltimore and London. Visit IEEE Spectrum Online often, and contribute to the "Geek Guide," too! London: <http://boldfish.ieee.org:80/u/1510/04824637>; Baltimore: <http://boldfish.ieee.org:80/u/1511/04824637>
- Deadline Nears for Mass Media Fellowship Application: IEEE-USA seeks two U.S. IEEE student members to work as reporters, researchers, and production assistants in magazine, newspaper, and radio newsrooms across the United States. This will be part of a 10-week Mass Media Science and Engineering Fellows Program starting in June. Fellows must be able to explain complex scientific and engineering principles in a way the general public can understand. Applications are due by 15 January. Contact Stacey Pasco at spasco@aaas.org or (202) 326-6441 for more information or visit <http://boldfish.ieee.org:80/u/1512/04824637>
- The Sky's the Venue (Almost) for Aerospace Conference: Space started small, says the Big-Bang theory. So did the IEEE Aerospace Conference, which will take place once again at Big Sky, Mont., from 4 to 11 March. Besides seven plenary sessions, this year's conference will include 14 tracks, covering such diverse topics as space missions and operations, management, communications and navigation, space and air vehicles, software and computing, optics and electro-optics, avionics, and governmental involvement. Read more at <http://boldfish.ieee.org:80/u/1514/04824637>
- Proceedings of Wireless and Mobile Computing Conference Released: The Proceedings of the 2005 IEEE Wireless and Mobile Computing, Networking and Communications Conference are now available online and in print. Held last August in Montreal, the conference addressed the areas of wireless communications, mobile networking, and ubiquitous computing. For more information, or to purchase the proceedings, visit <http://boldfish.ieee.org:80/u/1515/04824637>
- IEEE Fellow Has Big U.S. Air Force Role. As a teenager in Cleveland in the 1960s, IEEE Fellow Ronald Sega followed the U.S. Apollo space missions avidly. He sat glued to his TV set when the first man landed on the moon. "I never thought I'd ever have a chance to go to space," he says. But get into space he did. Sega, appointed in August to the position of undersecretary of the U.S. Air Force, logged 420 hours in space during two space shuttle missions in the mid-1990s. Read more at <http://boldfish.ieee.org:80/u/1677/04824637>
- Let's Not Overlook Standards: Engineers designing products know that they must comply with certain formal standards if the fruits of their labor are to be widely used, but few U.S. engineering students know much about them. The IEEE hopes to change that, thanks to educational materials about standards it put up on the Web this month. The materials are written for university students, faculty members, and just about anyone else who might be interested. Learn more at <http://boldfish.ieee.org:80/u/1678/04824637>
- Hear It Now on Spectrum Radio: Readers who want to delve deeper into topics covered in IEEE Spectrum can tune in to Spectrum Radio, the magazine's new monthly Internet radio program. Available on IEEE Spectrum's Web site, the program features audio reports based on articles in Spectrum,

additional interviews, editors' roundtables, and stories produced only for radio. Find out more at <http://boldfish.ieee.org:80/u/1680/04824637>

- Honors for Outstanding Achievements in Educational Activities: The author of a book written to help high school students improve their math SAT scores was one of 11 recipients honored with an IEEE Educational Activities Board Award in November. Also honored were two teachers working wonders motivating students to take part in science and technology projects, and other awards went to educators and private companies for a range of accomplishments. Read more at <http://boldfish.ieee.org:80/u/1681/04824637>
- Journal Explores Impact of Digital Television: The January issue of The Proceedings of the IEEE contains the first comprehensive collection of tutorial papers on digital television. With contributions from international experts, the issue offers insight into the growing impact of digital television in two overview papers and in three special sections. The articles describe the primary emerging DTV Systems dominating Europe, Japan, and North America. The table of contents and abstracts of articles in the issue can be found in the IEEE Xplore digital library at <http://boldfish.ieee.org:80/u/1684/04824637>
- Deadline Nears for Standards Paper Competition: The International Electrotechnical Commission (IEC), in partnership with the IEEE, other societies, and The Economist magazine, have launched the IEC Centenary Challenge, a competition for papers on the economic and social impact of international standards on business. The top prize is US \$15 000. Anyone affiliated with an academic institution, including faculty members, heads of faculty, and teaching or research staff, may enter a paper. Registration for the contest ends 3 March 2006. For registration forms, rules, and more information, visit <http://boldfish.ieee.org:80/u/1685/04824637>

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